

*Issued by:***Cereal Disease Laboratory**

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*For the original, detailed reports from our cooperators and CDL staff, please visit the [Cereal Rust Situation \(CRS\)](#) reports page on the [CDL website](#) or click the [CRS](#) links found throughout the bulletin.*

Winter wheat harvest is underway in southern Kansas (27% harvested), Missouri (25%), southern Illinois (4%), southern Indiana (4%), Tennessee (27%), Virginia (50%) and Maryland (8%). Barley harvest is 75% complete in Virginia and 31% in Maryland. As of June 5, 79% of the spring wheat crop was planted as compared to 97% in 2010. The cool, wet spring delayed spring wheat planting in many areas.

- Low levels of wheat stem rust have been found in areas of the southern and central Plains and Ohio Valley.
- Severe leaf rust was found in two fields in western New York.
- Stripe is severe in areas of the Pacific Northwest and Utah.
- Aecial infections on buckthorn have been found throughout central New York.

**Wheat stem rust.** Generally, wheat stem rust has been found in scattered plots and fields at low levels in the central and southern Great Plains and Ohio Valley.

Stem rust was found at trace to moderate levels in plots in Sumner, Labette and Ellis counties in Kansas in early June (see CRS). Stem rust was found on the susceptible cultivar Winterhawk at late milk stage in two locations in Republic County in north central Kansas in mid-June. The severities ranged from 1-20% on flag leaves with incidences in the 10-15% range. Low levels of wheat stem rust were previously found on Winterhawk in Barber County, Kansas in late May (see CRS). Stem rust was found on wheat and barley at the Havelock Farm in Lincoln in Lancaster County in southeastern Nebraska on June 13. Low levels of stem rust were found in a field in Chariton County in north central Missouri in early June.

Low wheat stem rust incidences and severities were found on the cultivars Baker 200S and Pioneer 25R62 in commercial fields in Posey County in southwestern Indiana on June 3. The fields were at maturity. Low levels of stem rust were found in a nursery in Caldwell County in western Kentucky in early June.

To date, wheat stem rust has been found at low levels in areas of Texas, Louisiana, Oklahoma, Kansas, Nebraska, Arkansas, Missouri, Kentucky and Indiana (see stem rust observation map or CRS for details). Race QFCSC was identified from plot and field collections from southern Texas and south central Louisiana plots.

Stem rust observation maps can be found on the CDL website (<http://www.ars.usda.gov/Main/docs.htm?docid=9757>).



## Wheat leaf rust.

**Kansas** – Leaf rust is still at low levels in most areas in the state (see [CRS](#)). Leaf rust increased slightly in plots and fields in north central Kansas in early June. The rust increase will not likely cause any serious yield losses.

**Nebraska** – Leaf rust was found in plots at Lincoln in Lancaster County in southeastern Nebraska on June 3. Low levels of leaf rust were found in most fields surveyed in the southern tier of counties on June 10.

**Missouri** – Low levels of leaf rust were found in fields at soft to hard dough throughout much of the state in early June (see [CRS](#)).

**Iowa** – Low levels of leaf rust were found in a field at the meal ripe stage in Wayne County in south central Iowa on June 4.

**Kentucky** – In early June, leaf rust was widespread on susceptible cultivars (at late grain fill) not treated with fungicide. However, the rust arrived too late to cause any significant yield loss. The winter wheat crop is now at or near maturity.

**Illinois** – Low levels of leaf rust were found in a soft red winter wheat nursery in Pope County in southeastern Illinois on June 1. The plots were at soft dough stage.

**Indiana** – Leaf rust was found throughout the state and was moderately severe on some cultivars in early June.

**Minnesota** – Trace amounts of leaf rust were found in plots at Rosemount in southeastern Minnesota on May 26.

**Virginia** – Wheat leaf rust was light or absent in commercial fields in eastern and central Virginia. Fungicide use was widespread. Leaf rust was heavy in plots with susceptible plots in eastern Virginia in late May, indicating inoculum was present.

**Maryland, Delaware** – There have been no new reports since low levels of leaf rust were reported on the eastern shore areas in late May.

**New York** – Leaf rust from a suspected overwintering site was found in Cayuga County in north central New York on June 2. By June 20, low incidences of leaf rust were found across central, western and southern New York. Most fields had infections on the upper leaves, but a small number of fields with more severe rust had infections all over the plants typical of overwintering local infections. In western New York, a field of the cultivar Richland was nearly killed by leaf rust and an adjacent field of the cultivar Caledonia had green leaf tissue remaining only on the flag leaves.

Wheat leaf rust observation map can be found on the CDL website (<http://www.ars.usda.gov/Main/docs.htm?docid=9757>).

**Wheat cultivar *Lr* gene postulation database.** Please visit: [Leaf rust resistance gene postulations in current U.S. wheat cultivars](#).



## **Wheat stripe rust.**

**Kansas** – Low levels of stripe were found in most locations in the state and levels had increased slightly in some areas by early June. However, a few hot spots were found in fields in Ellis (central Kansas) and Smith County (north central Kansas) in early June. Susceptible cultivars in an irrigated nursery in Hays had nearly 100% incidence with severities in the range of 5 to 70%. The cultivars with severe disease depended on *Yr17* for resistance. Moderate levels of stripe rust (90% incidence, 10-50% severity) were found in a field in Smith County in north central Kansas in early June. By mid- June, stripe rust was inactive in north central Kansas (see CRS).

**Colorado** – Very low levels of stripe rust were found in plots of susceptible cultivars at Fort Collins in north central Colorado on June 13.

**Nebraska** – Severe levels of stripe rust were found scattered throughout a field in Adams County in south central Nebraska on June 10. Previously, a small focus of stripe rust (trace to 35% severity) was reported in a commercial field in southeastern Nebraska in late May (see CRS).

**Illinois** – Stripe rust at very low incidence was found in plots (near soft dough stage) in Pope County in southeastern Illinois on June 1. Previously, low levels of stripe rust were reported in plots in east central Illinois on May 13.

**Indiana** – In addition to the previous report of stripe rust in a southern Indiana field the second week of May, stripe rust has been found in plots and fields in west central and central Indiana, respectively in early June. Stripe rust in these areas is at low incidence and severity.

**Missouri** – Traces of stripe rust were found in many areas of the state in early June (see CRS).

**Utah** – High levels of stripe rust were found in commercial winter wheat fields in Weber and Box Elder Counties in north central Utah the second week of June. Most fields had been treated with fungicides, but some untreated fields were significantly impacted.

**Idaho** – Stripe rust continued to be an issue in northwestern Idaho in mid-June. Fields of susceptible cultivars not treated with fungicides will likely be significantly impacted.

**Montana** – Stripe rust is severe in many areas of the state including Hill, Prairie, Big Horn, Lake and Flathead Counties in mid-June (see CRS). The resistance in the cultivar Yellowstone is holding up while the reactions on the cultivars Genou and Jagalene vary by location. Fungicides are being applied in many areas.

**Washington** – Up to 30% of the winter wheat in Garfield County in southeastern Washington was affected by stripe rust by mid-June. Fungicide continues to be applied to control stripe rust. Producers in Asotin County (southeastern Washington) were on their third application of fungicides.

Conditions for stripe rust have been ideal in many parts of the Pacific Northwest.

Wheat stripe rust observation map can be found on the CDL website (<http://www.ars.usda.gov/Main/docs.htm?docid=9757>).

**Oat stem rust.** There have been no new reports of oat stem rust since the reports of oat stem rust in plots in Texas and Louisiana in April and May, respectively (see CRS).



Stem rust observation maps can be found on the CDL website (<http://www.ars.usda.gov/Main/docs.htm?docid=9757>).

**Oat crown rust.** Oat crown rust was increasing and spreading rapidly throughout the Matt Moore Buckthorn Nursery at St. Paul, Minnesota in mid-June. Early lines in the nursery were beginning to head. Crown rust aecia were found on buckthorn leaves throughout central New York the first week of June. Previously, crown rust was reported in plots in east central North Carolina the third week of May, northeastern Alabama in early May and central Texas in late April (see CRB #3, #4).

**Barley stem rust.** There have been no new reports of barley stem rust since it was found in windbreaks for watermelon fields in southern Texas in late April (see CRS).

**Barley leaf rust.** Low levels of barley leaf rust were found on winter barley plots at St. Paul, Minnesota on June 20. Previously there were reports in May from Virginia, North Carolina and California (see CRS).

**Barley stripe rust.** There have been no new reports of barley stripe rust since the reports from the Central Valley of California in April and May (see CRS).

**Rye leaf rust.** There have been no new reports of rye leaf rust since heavy leaf rust infections were observed on an unknown winter rye cultivar in rotation with watermelon in fields in southern Texas in late April.

**Rust on barberry.** Mature aecia were found on *Berberis chinensis*, *B. koreana*, and Emerald Carousel (hybrid) in the Twin Cities area of Minnesota in mid-June. Aecia were also found on ornamental barberry hybrids (Emerald Carousel and Golden Carousel) in Wisconsin. These are likely aecial stage of stripe rust on Kentucky bluegrass (*Poa pratensis*).

